



**STATE OF MONTANA
MONTANA DEPARTMENT OF TRANSPORTATION
JOB PROFILE**

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Update

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Formal Review

Date Submitted _____

SECTION I - Identification

Working Title: Design Technician I & II

Department: Transportation

Job Code Number: 173134

Division & Bureau:
Engineering/Traffic & Safety

Job Code Title: Design Technician

Section & Unit: Signing

Pay Band: 4

Work Address: Helena

Position Number:

36002, 36005, 36017, 36021, 36022, 36030

Phone:

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FLSA Exempt

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FLSA Non-Exempt

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Non-Union

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MPEA

☐

Blue Collar

Profile Completed By:

Pamela Aldridge

Work Phone:

Work Unit Mission Statement or Functional Description:

Traffic and Safety Bureau is responsible for managing and coordinating highway safety programs and for providing management, design and technical support with respect to traffic engineering within the department. The Bureau is responsible for developing and reviewing plans and specifications for highway safety projects. The Bureau consists of the Traffic Safety Section, Traffic Engineering Section and the Rail/Highway Safety Unit.

Describe the Job's Overall Purpose:

The Design Technician is entry level to the Designer series career ladder. The position is responsible for performing a variety of technical and pre-professional drafting and design duties. Assigned work begins at the basic level and includes detailed instruction on what attributes need to be designed, data analysis and developing plan details.

Design Technician I performs design work of average difficulty on rural, primary and interstate systems, and primary arterials passing through small urban and rural communities. These types of projects usually have minimal signing.

Design Technician II performs design work of advanced difficulty. The level of complexity of the projects assigned are advanced rural, primary and interstate, and advanced primary arterials passing through moderately sized urban communities.

SECTION II - Major Duties or Responsibilities	% of Time
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Project Development	30%
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Performs a variety of technical and pre-professional field, office and administrative duties in support of ongoing design projects.

Determines the Signing Units involvement by reviewing the correspondence within each project file. Researches and analyzes all available project information for the plan development process. Obtains past as-built plans, determines if there are other projects planned in the area. Coordinates traffic plans design activities with other sections, bureaus, and districts. This information is used for the proper development of the signing, pavement marking, and delineation plan sheets.

Performs sign inventories and on-site inspection statewide to gather information of existing traffic control devices and topographic features impacting the design..

Prepares cost estimates to aid in the selection of alternatives. Writes special provisions for the traffic signing and pavement markings to clarify the general specifications of the bid documents. Prepares and compiles bid quantities.

Reviews traffic plans and specifications sheet by sheet to calculate specific pavement marking quantities necessary as requested by the project lead for incorporation into their plans.

Prepares a variety of memoranda, mostly form letters, and reports of meetings and for inquiries about signing and pavement markings within the Department. Helps other designers in the completion of projects and checks sign designs, quantities and estimates.

Preliminary Design Plans	50%
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Performs traffic design work for the signing and pavement marking plans for roadway projects. Identifies problems that do not fit the standards, and proposes solutions. Establishes placement of traffic control devices in relation to design speed, roadway geometry, roadside features and driver information needs for inclusion in final design package.

Prepares a clear detail and description of installation requirements and quantities to the contractor and construction staff to facilitate construction. This involves determining and identifying specific and detailed data for every sign location, including calculating sign lay-outs using the Federal Highway Administration Alphabets, sign location, calculation of height of posts on the basis of roadway cross sections, specifies types of posts and breakaway devices and sign sheeting material. Drafting tasks extensively utilize MicroStation, computer aided drafting design (CADD) software, but also occasional pen and ink techniques.

Other Duties	20%
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Performs a variety of other duties as assigned in support of Section, Bureau and MDT goals and objectives. Assists other MDT programs on special projects and attending training and educational sessions as required.

The following duties and/or specific tasks listed under section II above are considered "essential functions" because they require specialized expertise and skill and are the primary reasons the job exists (they must be performed by this position with or without accommodations):

Project Development and Preliminary Design plans are the two essential functions of this position.

The following mental and physical demands are associated with these essential functions:

PHYSICAL

- Mostly office work with occasional periods of extensive field work with overnight stays.
- Lifting objects in excess of 30 lbs.
- Extensive travel throughout the state or district to project locations.
- Ability to walk over uneven terrain or in water.
- Operating a personal computer.
- Communicating in writing, in person and over the phone.
- Continual walking or standing.
- Exposure to extreme weather and high-speed traffic.
- Operation of motor vehicles.
- Operation of power tools and/or equipment.

MENTAL

- Ability to perform work under tight schedules and stressful situations.
- Ability to prioritize work due to multitude of sites, corridors and safety reviews.
- Computing arithmetic operations.
- Comparing data.
- Compiling information, Analyzing, Coordinating.
- Ability to multi-task.
- Ability to meet inflexible deadlines.
- Professional interpersonal skills and behaviors.
- Demands for accuracy in all aspects of work.

Does this position supervise others? ☐ Yes ☒ No

Attach an Organizational Chart.

SECTION III - Minimum Qualifications - List minimum requirements for the first day of work.

Critical knowledge and skills required for this position:

KNOWLEDGE:

Understanding the concept of design drafting technology. Working knowledge of computer aided drafting and design (CADD) software packages

SKILLS:

Effective written and verbal communication with a variety of audiences, maintain professional working relationships, and can operate various types of office equipment.

Behaviors required to perform these duties:

See MDT Core Behaviors

Education:

Check the one box indicating minimum education requirements for this position for a new employee the first day of work:

- | | |
|---|---|
| <input type="checkbox"/> No education required | <input checked="" type="checkbox"/> Related AAS/2-years college/vocational training |
| <input type="checkbox"/> High school diploma or equivalent | <input type="checkbox"/> Related Bachelor's Degree |
| <input type="checkbox"/> 1-year related college/voc. training | <input type="checkbox"/> Related Master's degree |

Please specify the acceptable fields of study:

Design Technician I – Band 4 level 1

Associates degree or equivalent and some technical training or experience in drafting and technical work in highway design, survey, transportation planning, highway construction or traffic engineering.

Designer Technician II – Band 4 level 2

Associates degree or equivalent and at least one year of technical training or experience in design drafting technology that includes a working knowledge of computer aided drafting and design (CADD) software packages.

Experience:

Check the one box indicating minimum work-related experience requirements for this position for a new employee the first day of work:

- | | |
|--|--|
| <input checked="" type="checkbox"/> No prior experience required | <input type="checkbox"/> 3 years |
| <input type="checkbox"/> 1 year | <input type="checkbox"/> 4 years |
| <input type="checkbox"/> 2 years | <input type="checkbox"/> 5 or more years |

SECTION IV – Other Important Job Information

- | | |
|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver's license |
| <input type="checkbox"/> Background check | <input type="checkbox"/> Other; Describe |

SECTION V – Signatures

Signature indicates this statement is accurate and complete.

Employee:

Name: _____ Title: _____

Signature: _____ Date: _____

Immediate Supervisor:

Name: _____ Title: _____

Signature: _____ Date: _____

Bureau Chief:

Name: _____ Title: _____

Signature: _____ Date: _____

Division/District Administrator:

Name: _____ Title: _____

Signature: _____ Date: _____

Department Designee:

Jennifer Jensen/Designee

Chief Human Resources Officer
Human Resources Division

Signature: _____ Date: _____